

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
12 May 2005 (12.05.2005)

PCT

(10) International Publication Number
WO 2005/042152 A1

(51) International Patent Classification⁷: **B01J 35/00**, 21/02, 21/06, C09D 1/00, C09C 1/36, C03C 17/25

(21) International Application Number:
PCT/JP2004/016481

(22) International Filing Date: 29 October 2004 (29.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003-370366 30 October 2003 (30.10.2003) JP
60/517,101 5 November 2003 (05.11.2003) US

(71) Applicant (for all designated States except US): **SHOWA DENKO K.K.** [JP/JP]; 13-9, Shibadaimon 1-chome, Minato-ku, Tokyo 1058518 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **SANBAYASHI, Masayuki** [JP/JP]; c/o Showa Titanium Co., Ltd., 3-1, Nishinomiyamachi, Toyama-shi, Toyama 9318577 (JP). **TANAKA, Jun** [JP/JP]; c/o Showa Denko K.K., 13-9, Shibadaimon 1-chome, Minato-ku, Tokyo 1058518 (JP).

(74) Agents: **AOKI, Atsushi** et al.; A. Aoki, Ishida & Associates, Toranomon 37 Mori Bldg., 5-1, Toranomon 3-chome, Minato-ku, Tokyo 1058423 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/042152 A1

(54) Title: TRANSPARENT FILM-FORMING COMPOSITION

(57) Abstract: A composition for forming a transparent film, comprising photocatalytic particles; zirconium ammonium carbonate; a cohydrolysis-polycondensation product of an aluminum alkoxide represented by the formula Al(OR)₃ where R is an organic group and a titanium alkoxide represented by the formula Ti(OR')₄ where R' is an organic group; and water, and having a pH of 7 to 9.